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ANISOTROPIC ETCHING OF
ORGANIC-CONTAINING INSULATING LAYERS

Abstract of the Disclosure

A method for forming an opening in an organic insulating layer by covering the insulating layer with a bilayer containing a resist hard mask layer and a resist layer on top of the resist hard mask layer. The bilayer is patterned, and an opening is created by plasma etching the insulating layer in a reaction chamber containing a gas mixture. The plasma etching is controlled so that virtually no etch residues are deposited and so that the side walls of the opening are fluorinated to enhance the anisotropy of the etching.

The gas mixture can be a mixture of a fluorine-containing gas and an inert gas, a mixture of an oxygen-containing gas and an inert gas, or a mixture of hydrogen bromide and an additive.

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